

Assessment of the Level of Clinical Preparedness amongst EMS Professionals in Managing Life Threatening Emergencies in Suspected Covid 19 Patients

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Abstract

Introduction: SARS-CoV-2 virus has infected millions of people worldwide and has claimed lakhs of lives in its wake. The sudden onset of the pandemic has led to increased levels of anxiety and depression amongst healthcare workers. EMS professionals are the first responders and need to provide emergency Medical Care to their patients. They are required to perform lifesaving interventions in a short period of time. As it is not possible to ascertain the Covid status of the patient, hence EMS professionals are at the greatest risk of getting infected. The study aims to assess the level of clinical preparedness of EMS professionals and suggests recommendations to improve upon it.

Objective: To assess the level of clinical preparedness amongst EMS professionals in tackling life threatening emergencies in suspected Covid 19 patients.

Methodology: The study was conducted amongst 150 Emergency Medical Professionals in Pune, India.

Respondents were asked to respond to each item using 5 point Likert scale. The Questionnaire was administered to the respondents through online mode after obtaining informed consent. Responding to all questions was mandatory. The respondents were given a period of two days to fill the questionnaire.

Discussion: The present study was aimed at examining the current level of preparedness with regards to the disease after nearly a year of the pandemic. The result obtained in terms of knowledge were encouraging and pointed to the fact that the EMS professionals had received adequate training in identification of suspected cases and their initial management. Majority of the respondents suffered from high grade anxiety of contracting the infection. The study highlights the urgent need to conduct counselling and stress management sessions for better mental health of EMS professionals and showed that hospitals are slowly but steadily devising appropriate protocols and safety measures to protect their employees.

Conclusion: The contribution of EMS professionals in providing emergency lifesaving care to suspected Covid 19 patients cannot be over emphasized. As the pandemic continues it is essential to ensure the mental and physical of all healthcare professionals. The study is a small attempt to portray the level of knowledge and mental attitude amongst EMS professionals. The findings need to be corroborated with a larger multicentric study.

Keywords: Emergency Medical Services (EMS) professionals, Covid 19, Pandemic, Anxiety, Clinical Preparedness.

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Introduction

Since the first case of Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the virus has infected millions of people worldwide and has claimed

lakhs of lives in its wake. The high degree of infectivity of the virus has led to rapid spread of infections among health care professionals. This has led to a plethora of psychological issues amongst healthcare and frontline workers who have been forced to deal with the pandemic.^{1,2}

It has been determined that the main mode of transmission is through direct human contact, via respiratory droplets and fomites with the clinical manifestations in the form of fever, dry cough, breathlessness and patches in lung³. The disease is associated with higher rate of mortality in people with underlying comorbidities and healthcare professionals. A study by Mohd. Hanawi K et al⁴ in 2020 laid emphasis on the significance of targeted health education interventions for vulnerable population, to reduce the risk of contracting COVID-19.

The sudden onset of the pandemic has led to increased levels of anxiety and depression amongst healthcare workers as they are concerned about the wellbeing of their families. The pandemic has led to a condition called state anxiety described first by Konter⁵ in 1996, wherein, distress, worry and tension occurs before or during alarming and dangerous situations due to logical reasons. The concerns of healthcare professionals with regards to Covid 19 are logical as they have to come in close contact with the infected patient and the transmission is airborne.

It is expected that healthcare professionals have to work longer hours during this pandemic. Hence their mental and physical preparedness as well as positive attitude are essential to their optimum performance. A similar situation had occurred in 2003 during the SARS pandemic wherein the mental health of HCP was adversely affected with fear of contracting the virus and infecting family, friends and colleagues.⁶ A recently published study by Jianyu Que et al⁷ laid emphasis on the higher risk of anxiety, insomnia and psychological issue amongst front-line healthcare workers compared to their counterparts who were not involved in care of Covid 19.

EMS professionals are the first responders and need to provide emergency Medical Care to the patients. Timely provision of medical aid even before the patient can reach the hospital can play an important role in

saving the life of the patient.⁸

EMS professionals are required to perform lifesaving interventions in a short period of time. In such cases it is not possible to ascertain the Covid status of the patient. Hence EMS professionals are at the greatest risk of getting infected⁹. The nature of tasks performed by EMS professionals include coming in close contact with the patient, travelling in enclosed environment during patient transport with extremely limited medical information^{10,11}.

The Centre for Disease control, Atlanta has formulated detailed guidelines to be followed by EMS professionals so as to ensure minimum risk of contracting the infection.¹¹ But it remains to be seen whether EMS professionals are aware of the guidelines and follow.

Managing emergencies even under Covid 19 era is inevitable. The quality of care provided to the patient cannot be compromised due to lack of knowledge or anxiety amongst EMS professionals.

The study aims to assess the level of clinical preparedness of EMS professionals and suggests recommendations to improve upon it.

Objective:

To assess the level of clinical preparedness amongst EMS professionals in managing life threatening emergencies in suspected Covid 19 patients.

Methodology

The study was conducted amongst 150 Emergency Medical Professionals in Pune, India. A

previously tested and validated questionnaire designed by Reem Al-Dossary *etal*⁹ in 2020 was utilized for the study.

The sixty-two item questionnaire meant for Healthcare Professionals consisted of 38 items assessing the Knowledge and Awareness levels, 14 items pertaining to Prevention of Covid 19, 6 items assessing the mental attitude of professionals and 4 items regarding their perception of Covid 19 infection.

Respondents were asked to respond to each item using 5 point Likert scale: (1 = Strongly Disagree 2

= Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree). The Questionnaire was administered to the respondents through online mode after obtaining informed consent. Responding to all questions was mandatory. The respondents were given a period of two days to fill the questionnaire. Any queries pertaining to the questionnaire was clarified during data collection.

All 150 respondents reverted with completely filled questionnaire. The data was tabulated

and statistically analyzed with the help of SPSS version 23.

Results

As per the demographic data, 63% of the respondents were between 20 to 25 years of age with 69% of female respondents. Majority of them had less than 5 years of clinical experience. When the duty hours before and after covid outbreak was compared it was observed that 50% of them had to work for more than 8 hours/day after covid outbreak whereas only 37% of them had to work for 8 hours/day before covid outbreak.

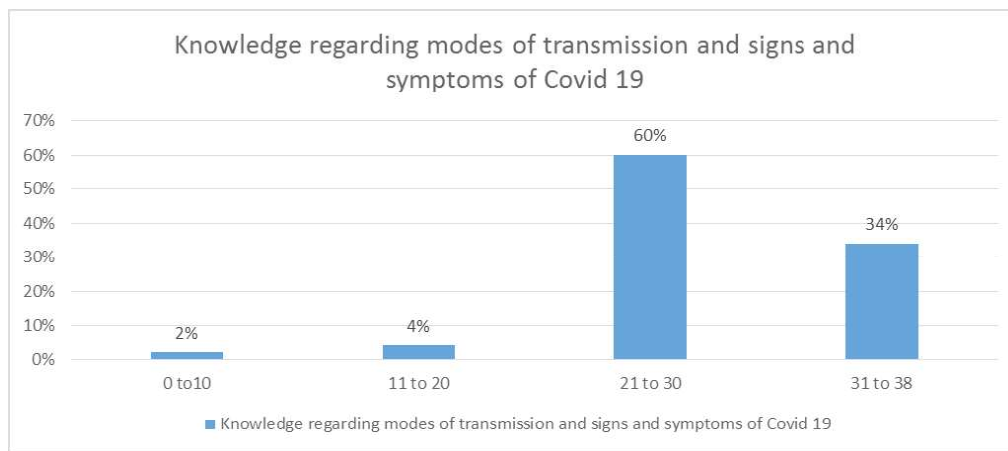


Figure 1: As seen in figure 1. Out of the 38 parameters pertaining to the knowledge regarding transmission, Signs and Symptoms and initial management: Majority of the respondents scored well with 34% of them scoring above 30 out of 38.

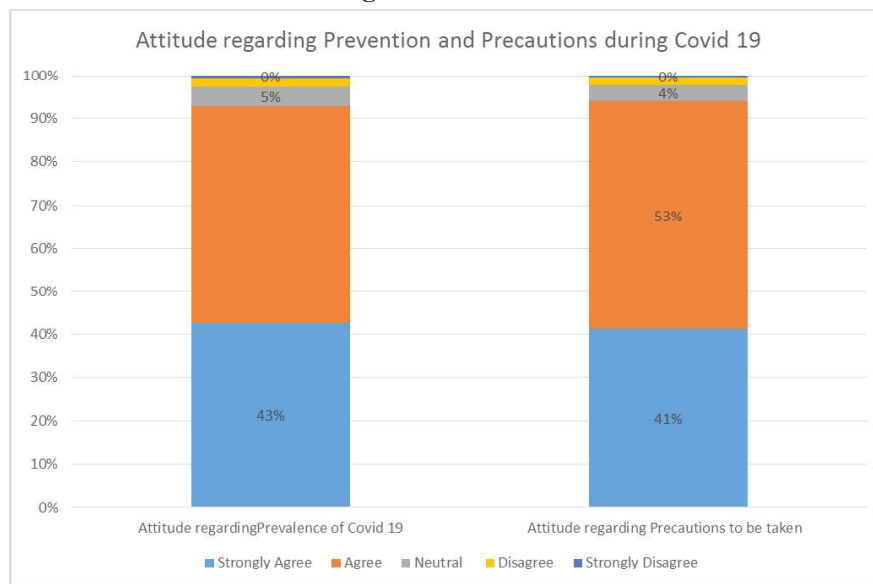


Figure 2: As shown in figure 2, majority of the respondents showed a positive attitude regarding the steps to be taken for prevention of Covid 19 and precautions required to minimize its spread.

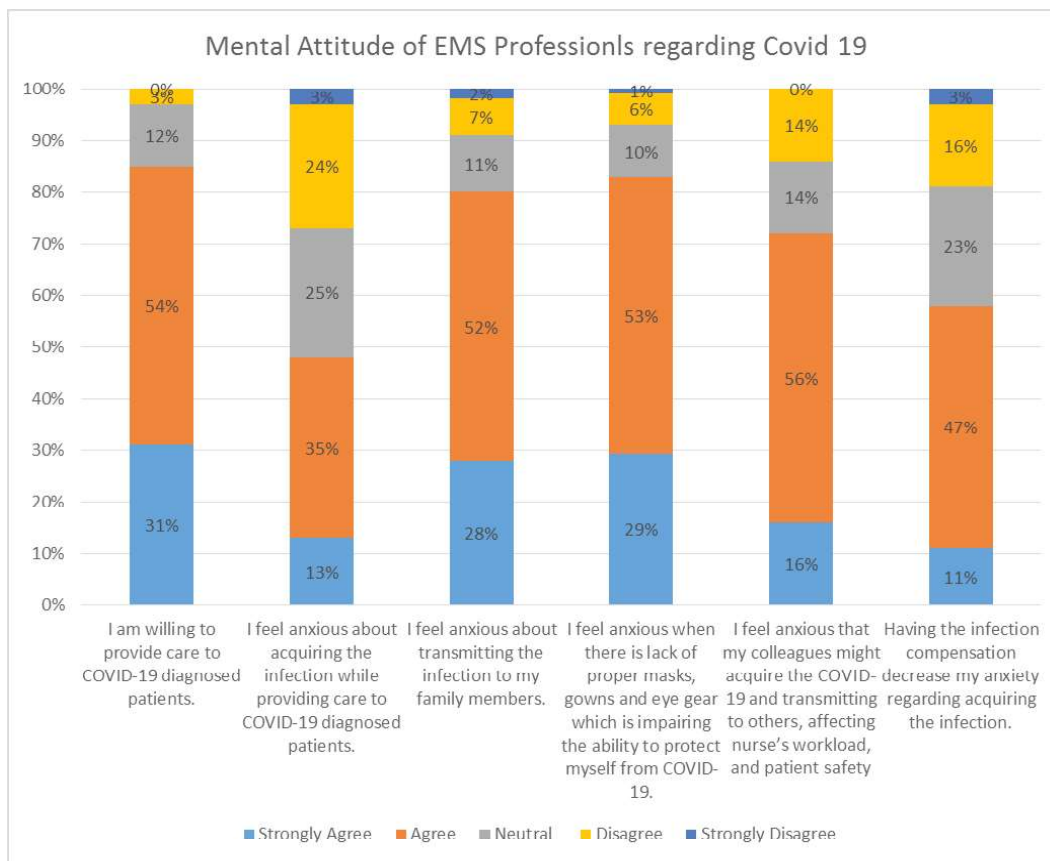


Figure 3: As seen in figure 3, majority of the respondents were willing to provide care to Covid 19 patients. Although most of them were anxious about acquiring infection and transmitting it to their family members. Most of the respondents felt anxious regarding lack of availability of personal protective equipment and spread of infection at workplace.

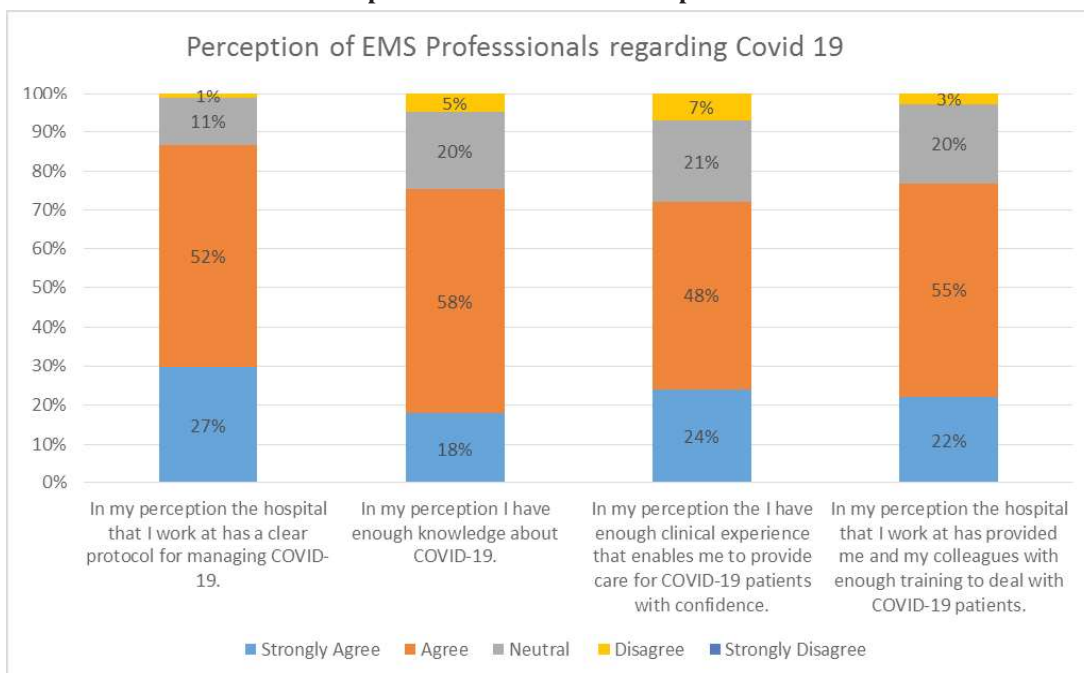


Figure 4: As seen in figure 4, a vast majority of the respondents displayed positive perception towards their hospital efforts in following Covid 19 protocols. Most EMS professionals felt that they possessed sufficient knowledge and clinical experience to provide emergency care to suspected Covid 19 patients.

Discussion:

The Covid 19 pandemic spread in a very short span of time and Healthcare professionals were caught unaware. Among them the EMS professionals had to continue dealing with various kinds of emergencies as the first line of care. This predisposed them to acquire the infection from the patient as the Covid 19 status of the patient could not be ascertained at the time of emergency. Even though EMS professionals were advised to take all precautions to avoid transmission of infection, this led to a high degree of anxiety amongst them.

Knowledge of the clinical signs and symptoms and transmission pattern of the disease is essential for all healthcare professionals. Suspecting Covid 19 in a respiratory emergency patient is essential for both, providing optimum first line of care and avoiding infection transmission. The present study was aimed at examining the current level of knowledge with regards to the disease after nearly a year of the pandemic. It is imperative that EMS professionals are well versed with the clinical features, basic emergency treatment and prevention of transmission in all suspected emergency patients. A vast majority of the respondents scored well on the items pertaining to the knowledge of the disease. Nearly all the EMS professionals were aware about the importance of PPE, handwashing at frequent intervals and following social distancing norms wherever possible. The result obtained in terms of knowledge were encouraging and pointed to the fact that the EMS professionals had received adequate training in identification of suspected cases and their initial management.

Majority of the respondents were willing to handle suspected Covid 19 patients. They suffered from high grade anxiety of contracting the infection. The respondents also communicated anxiety with regards to acquiring the disease at the workplace and professional colleagues. They were also worried about transmitting the infection to their loved ones. Serving the population irrespective of their Covid status is the duty of all healthcare professionals and EMS professionals are fulfilling their duties. But it is essential to allay their fears and anxiety for their own wellbeing and to ensure quality care to the patient. The study highlights the urgent need to conduct counselling and stress management sessions

for better mental health of EMS professionals.

In spite of the anxiety EMS professionals showed positive attitude towards contributing to their emergent care of suspected patients. They also showed a high degree of trust on their employers i.e. hospitals in making relevant arrangements for personal protective equipment. Provision of compensation in case they develop infection helped reduce their level of anxiety. The findings show that hospitals are slowly but steadily devising appropriate protocols and safety measures to protect their employees.

Conclusion

The contribution of EMS professionals in providing emergency lifesaving care to suspected Covid 19 patients cannot be over emphasized. As the pandemic continues, it is essential to ensure the mental and physical of all healthcare professionals. The study is a small attempt to portray the level of knowledge and mental attitude amongst EMS professionals. The findings need to be corroborated with a larger multicentric study.

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